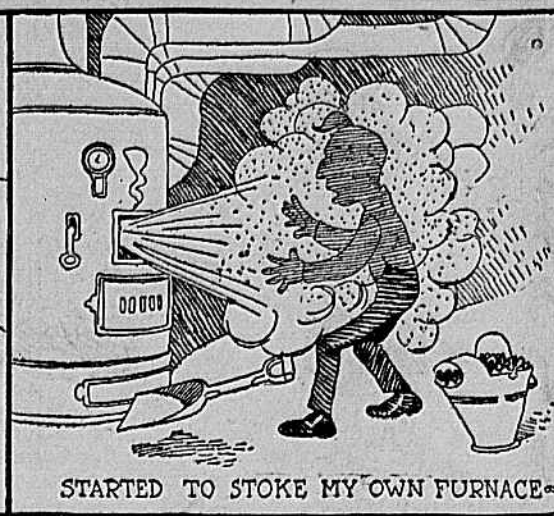


# For the Man Who Works With Hand or Brain.



## Don't Work Around House; If You Do You Lose Money.

By Hugh S. Fullerton.

NO man who earns \$25 a week or more can afford to do any work at all, except for his own pleasure, around his own home. No man, unless he possesses a knack for tinkering and handling tools, can afford to do his own chores.

Men who earn above \$25 a week, and who are not "handy around the house," should employ other men to do their work at home. They will save time, temper, and money. They cannot afford to hang their own screens, doors, or put up storm windows, to fix broken hinges or faucets, to clean the furnace, and not one in ten can afford to run his own furnace.

Men who buy or rent houses usually have the love of flowers and shrubs and grass—and, on that score, they should cut their own lawns and tend their own flower beds. But it simply is wasting money and valuable time for them to attempt their own painting, calicining, or papering.

### Tried to Repair a Leak.

I know a man who tried to repair a leaky roof. The leak was caused by a heavy weight falling on the tin of a bay window roof. The tin had bent, leaving a small gap where it joined the wall, and a bad leak resulted.

"It would have taken an experienced tinner ten minutes to repair the roof after he got his ladder in position. This man climbed out a window on to the roof with solder, a red hot iron that he had heated in the kitchen stove, and a hammer. In five minutes he had burned his fingers, narrowly escaped falling, had dropped a hammer and broken a rose bush. Then he found his iron was too cool to use, and started to climb back into the window. He found he was too fat and heavy to draw himself up to the window again, and sat there until his wife and the cook borrowed a ladder and let him escape.

Then he sent for a tinsmith, who discovered that his weight had damaged the roof still more. The bill for repairs then was \$1.50. It would have been 75 cents if he had sent for the man in the first place.

### Finds That It Doesn't Pay.

I had an experience myself a few weeks ago. Now I am rather handy around the house—but I gave up long ago trying to do things for myself. In the first place my time is too valuable. My time is worth at least \$1 an hour to me—in or out of the office—and I can hire better men than I at \$2 a day to do the work around the house. But this time the man who was coming to

put on storm windows failed, and I understood it myself. I showed the windows in forty-five minutes, but not very well. Then I started to carry the storm sash from the basement outdoors. I got them all out safely and was putting the windows in place satisfactorily, although my wife had hysterics every time I crawled over a steep porch roof.

Before I had finished a gust of wind blew down one of the windows, the one for the center window of the front bow, and broke all four panes of glass. It cost me \$10 to get that glass replaced. I could have hired a man to put on the windows for 75 cents.

### Concels Real Cause of Industry.

Of course this was an accident—but accidents happen to unskilled workers much more frequently than to skilled ones. The ordinary house owner is as full of conceits as a peacock. He thinks he can do anything around a house, simply because he owns the house. And he really thinks he is saving money by doing the odd jobs himself.

I know a man who painted his front porch. I sat on my front porch and watched him. It took him nearly three hours to paint the floor—and he quarreled with his wife because she offered some mild criticism. He spoiled the clothes he was wearing. He spoiled his temper—and spent three good hours. These hours (I know his salary) were worth \$4.50 to him. He paid \$1.35 for the paint brush, \$1 for the paint.

The painter up the street told me that he would have done the job for \$2.75. One might figure that the paint brush was a permanent investment and that part of the paint would be left. Maybe so—but that paint brush, dried and ruined, is standing in the storeroom in his basement. I saw it the other day when I went over to borrow the curtain stretchers.

### Sad Experience with the Furnace.

When I first bought my house I had the idea of saving money by doing things for myself. I started to stoke my own furnace. I arose at 4 a. m. and built up the fire (four times that winter they were out entirely). I got my eyes full of ashes at least once a day. I spoiled clothes, temper, wasted time that

was valuable, lost sleep, and either roasted or froze the family. My little girl had colds all winter, my wife had sore throat twice—and the doctor's bill was something frightful.

I burned \$147.50 worth of coal (seventeen tons of hard and two of soft), besides burning out the grate.

The next winter I hired a janitor at \$8 a month to run the furnace, slept until breakfast time, kept the house fairly comfortable, and burned only \$120 worth of coal. I paid the janitor \$42 in all, but he washed windows, then I ran over to the grocery and stopped to see when that man was coming to beat rugs. Then I took the baby out for an airing, got supper, and put the children to bed.

Wife said I was a jewel and thanked me for helping her. I turned in, a physical wreck. She does not realize this day that we could have hired a woman for \$1.50 to do better than I did, and that we would have been \$18.50 ahead if I had gone downtown.

### Tries to Do the Calicining.

It was the same way with the calicining. We had a little room that needed redecorating, and she thought it was a shame to pay a man to come to do it. I protested mildly, but she figured where she could save the price of a new pair of shoes on that room, so after carefully thinking it over I surrendered.

## Politeness Wins Big Pay for Bell Boy.

By Levi Mosher

THERE are few first class hotels in big cities that do not number among their bellboys enterprising youths that wear diamonds. A bellboy that does not wear good clothes off duty is looked down upon by those that do. They crave the latest fashions, live well, and many of them spend much money, while others save it.

A bellboy's lot in a big hotel is about as happy an existence as any young fellow can ordinarily get upon an income that seldom exceeds \$20 a month. Answer—politeness.

When a bellboy wants to go to work he has, in nineteen cases out of twenty, to pay a bonus to the bell captain or man who engages the boys, directs their work, and dis-

charges them. During the World's fair in St. Louis \$100 was an unusual price for a boy to pay for a position. There are several boys working in Chicago hotels who have paid \$50 for their places. In some instances the bell captain exacts a weekly fee from the boys' tips and the boys have to pay in most cases for their own clothes.

Yet in the face of all these demands that are made upon his resources, it is a slow footed and slow witted bellboy who in first class hotel cannot make \$25 a week. In most cases the average is higher.

The good bellboy is the epitome of fleet-

ness of foot, softness of voice, amiability, and willingness. As a rule he knows his city as well as he knows the palm of his hand. This knowledge he coins into money when strangers want to know things about the city. He knows that a smile gets more money than a frown and on duty the first class bellboy never has any visible troubles. Dishonesty among them has gone out of fashion.

The hotels have a way of punishing the boy who slips from honesty of path. They simply agree never to employ him again. Other hotels join in the blacklist and the bellboy finds that honesty is not only a cardinal virtue, but that it is indeed the best policy.

## Be Honest with Yourself; It Will Help to Success.

By John A. Howland.

HOW me a man who is absolutely honest with himself in all of the most material things of every day, and I shall expect to see a man who is pretty fairly honest with his fellow man. Why? Simply for the reason that the average man who is not scrupulously honest with himself every day cannot afford to be honest with everybody else.

To begin with, the great majority of the world's workers are laboring for a wage or other form of compensation which is fixed for the individual by some condition or circumstance in which he has little or no voice. For the type of salaried person at large, he gets a certain salary for the reason that his predecessor got only so much. Simply "the job pays so much." The applicant takes the place at the money or it goes to some one else.

Today there are few positions open in the world in which the successful applicant gets more money than he had expected to get. In the great majority of places he gets con-

siderably less. He will be in the natural attitude of wishing to spend more money than he will be able to spend.

**Salaried Man Taxed Everywhere.** Against this condition of wishing for more than he can get, he puts his first pay envelope into his pocket. If he has been a capable, honest worker, he has received considerably less than he has earned for his employer.

With these proceeds in his pocket the young man goes out to pay his debts and to purchase for his pleasure and his needs. Everywhere he turns he is front to front with the person who he knows is taking a profit off his already profit skimmed wages. He cannot get back home without giving a transportation company the profits from his carfare. Food, light, heat, clothing, pleasures—all exact of him not only the payment of full cost but that additional profit of which for the most part he has not the least to say. Just as his wage profit

was measured by his employer, so his purchases measure the individual tax which they shall levy.

Between his arbitrary income and his arbitrary expenditures, the salaried man has no means of recouping unless by other effort outside his salaried occupation he gets more money, subjected to just the same form of discount. Out of this physical condition as wage earner and consumer, the salaried person at any time finds it to his advantage to discover the economic conditions in the country are just bad enough to leave his salary undisturbed, while in the main the producer and the middleman in every field of endeavor are profiting the least that their business will bear!

### "Prices Up"—Wage Earner Pays.

One of the commonest of comments today brought to the ear of the consumer who

may be questioning is that "prices have gone up, you know." This may be the price of meat, bread, clothing, and the news of the change is brought to the ear of the customer with the least possible chance of his contesting the arbitrary statement.

Where the customer himself is in business he has the opportunity to say to himself, "Well, I shall have to mark up some of my own prices." Even so the producing farmer in many lines may say to himself: "I shall not sell at the market figures. I'll hold for a rise in my own products."

But the salaried man or the wage earner makes his profits for his employer and pays everybody else a profit, even to the savings banker who handles the few dollars which the wage earner may have managed to save, and in his heart, as he works and pays, he may be exclaiming at times he wishes somehow that "times were not so awfully good" as they are.

### Should Form Economic Principles.

It is in this position that the man as wage earner must feel the impelling necessity for being honest first with himself. No man more than he needs to map out for himself a rule of life in business on more economic principles. The average young man is too slow to regard the facts of business life. He is too old when they strike home to him forcibly. The manufacturer of a certain article which he controls and to which he attaches an arbitrary price will not rest satisfied at fixing the price of the finished product if by any means he may gain control of the raw material and fix the price of that. He may build his own electric plant in order to save profits which a supply company would take. He builds machinery to cut down the number of employees. But the young employee whose salary is cut at both ends, in striking contrast to these methods, may be paying a profit to a bootblack to shine his shoes and to a barber for shaving his downy pretense for a beard.

### "Letting Accounts Go" Is Wrong.

Not long ago I overheard a young man in the office of a \$5,000,000 corporation say to a fellow worker that on a bit of special business for the concern he had spent about 80 cents in carfare.

"You put it into an expense account, didn't you?" queried the other.

"O, no," was the answer; "it's only a few cents—if I spent money that way regularly I'd have to do it, but—O, well, what's the use?"

Yet that young man did not earn more than \$2 a day at the most, and as he stated the proposition he had done a good deal of extra work for the company on that day for just 60 cents less than he would have got for his ordinary routine. Frankly, if I had been his employer, his point of view would have made me suspicious of him.

As a business proposition to him, were the firm of \$5,000,000 capital the spender of the 80 cents, it could be counted upon that this entry would have found place all down

## Figuring Costs Vital Work in Big Plants

By A. G. Hunter.

UNTIL recent years the term "cost department" was little used in business. Today it is one of the foremost factors in commercial life. It has come to be practically the only source from which the manufacturer safely and intelligently can gather information with which to meet the outside world. It is the only practical medium through which the accountant can cooperate with the shop correctly. It is the greatest possible means to greedy competitors, who, through the disclosures it makes, are compelled to sell at the lowest possible margins. To the customer it assures protection. He is not paying two prices for one article and buying another from the same firm at half price. In fact, from the standpoint of either producer or consumer, it is hard to conceive how business could be safely carried on without a thoroughly organized cost system to guide.

The ways in which such a system may be operated vary as widely as the character of the merchandise turned out. The work may be simple or it may grow into a mass of complications. If the shop be small and a specialty is made of only one line, cost work may be made concise. But if the factory be large and the variety of manufacture practically limitless the chances are that the results will be obtained only through an intricate mass of details.

### Facts Found in Factory.

Naturally the bulk of the information necessary to produce the proper results must come from the shop. For in the shop practically all the expense of manufacture is incurred. It is quite essential, then, in order that cost department reports may be reliable, that the organization of the shop be well defined and regulated with this end in view.

The cost department is by no means a new creation, but the outgrowth of much experi-

menting and study. Doubtless its development has been augmented in recent years by the fact that competition has lightened so materially in nearly every line of manufacture that managers have been forced to use practical methods in order to keep aloft.

Until recently manufacturers have been doing business on the theory of average costs. Proper classification of the shop was considered of minor importance. To "get out the goods" had been their chief aim, with little or no thought as to the detailed expense. They did not consider that it was not so expensive to maintain the work of a boy at 70 cents a day in some remote corner of the factory pasting labels on tin cans as that of a highly paid molder in a brass or iron foundry where fuel and power are extensively used. The value of materials and wages only had been taken into consideration in determining costs, the other expenses attending the two classes of work being lost sight of entirely.

But as sale prices had to be reduced in order to keep pace with competitors, the cost of manufacture had likewise to be cut to the lowest possible scale in order to maintain profit. Unnecessary expenses had to be sought out and eliminated, and the little leaks which had been consuming so much of the profits had to be stopped. Average costs gave way to specific and actual, and the work of classifying the shop output was begun. And it is safe to say that at the present time, in every up to date factory, some system is maintained which tells the manufacturer what he can safely do with every article he puts upon the market.

### Scores of Cost Systems.

There are no number of cost systems in operation in the various factories of Chicago, and each is adequate in its own sphere. But the system which would be satisfactory for

an electrical firm would be far too complex for a clothespin factory.

In a system now in operation in one large plant the real secret of success lies in a well organized shop order scheme. At this factory the instructions to the various shop departments to do work emanate from one center—the shop order department. For every distinct lot of apparatus to be made this department issues an order on the shop. Every foreman whose department will be called upon to assist in the completion of this work is given a copy of the order, which comprises his instructions to proceed with the job.

From this stage until the job is completed each foreman is held responsible for proper records of all time spent and all materials used in construction, as well as the class of machines used in his department, for each individual order. And so carefully are these records made in each case that by use of them the cost department is able to tell within a small fraction the exact cost of every bit of work which the factory turns out. It matters not whether the shop order is issued to fill a customer's order, to make apparatus for stock, to furnish tools for shop use, or to do building repairs, the records are just as complete, and the cost department is able to report in detail on any or all of them.

### Keep Each Order Separate.

Ability to run each order through the shop independent of all others, is the underlying principle of the effectiveness of this cost system. It is possible for the shop to give out its information in definite and concise form, and that there is little danger of confusing the information is proved by the fact that, no matter what the stage of completion, the value of any job in process can at any time be ascertained.

As a reliable reference bureau to which all departments may go for valuable information nothing can replace the shop cost department,

## Gold May Be Made of Copper; Is Alchemist's Dream True?

By F. N. Horix.

A GROWING conviction that the alchemist's dream of the transmutation of metals may actually become a reality is due to the study of the emanations of radium. The belief is that as the atom of radium disintegrates it gives rise to helium, while it itself is thought to be the result of the disintegration of uranium. But if the atoms of all elements are made up of electrons, and if uranium and radium thus disintegrate into simpler substances, then it seems probable that all elements must be liable to a like spontaneous decomposition. One of England's great scientists suggests that lead may thus disintegrate into silver.

Silver and lead, it is pointed out, nearly always occur together. Lead almost invariably contains silver, and a silver mine is usually also a lead mine. Yet the chemical attraction between these metals is only slight, and they are not sufficiently common for the combination to be due to chance. It is not possible, then, that as radium disintegrates into helium, and uranium into radium, so lead may in like manner break up into silver? In both the cases cited it is the element of greater atomic weight which produces that with the less, and it may be noted that the atomic weight of silver is 108 and that of lead 207.

### Time Test Is Suggested.

The matter, it is suggested, might easily be put to the test of experiment. Let a few tons of lead be as absolutely freed from silver as the most refined chemical methods can accomplish. Let this purified lead be put aside for a number of years, and then

let it be tested for the presence of silver. Other interesting cases where two or more elements are usually associated are noted. Gold, for example, is frequently found along with copper. In New South Wales the Great Cobar mine furnishes copper containing four ounces of gold to the ton. The atomic weight of gold being 197 and that of copper 63, we must suppose that gold degenerates into copper. Hence the amount of native gold in the earth must be diminishing, while in the far past the rich copper deposits of Lake Superior, for example, probably were pure gold.

### Platinum May Produce Gold.

Again, traces of platinum are found in almost all native gold. This, in the light of the above suggestion, must be looked upon as the beginning of degeneration, for the atomic weight of platinum is 194.9 (Mendeleef), while gold is 197. And platinum is invariably associated with other rare metals, osmium, iridium, palladium, etc., of lower atomic weights. These latter, then, must also be looked upon as disintegration products of platinum.

The process of the breaking up of the atom, through which the element of greater atomic weight gives rise to the one with less, is spontaneous, and takes place with extreme slowness. But if such disintegration really occurs there are probably chemical or physical means by which it could be initiated, or hastened. And if such means can be discovered, then the old dreams of the alchemists of transmuting the baser metals into the nobler may be realized in at least one case—lead may be changed into silver.